

together, so that the first support means and the second support means move in unison;

means for cooling the processed substrate in the loadlock, said means for cooling including a plate;

means for changing the position of the first support and the second support at the same time while maintaining the plate at a fixed position;

wherein the means for heating and the means for cooling are disposed in the loadlock at the same time.--

### REMARKS

This amendment is being filed in response to the Office Action dated April 11, 2001, which was Paper No. 5 of the present application. Applicant has canceled claims 1-21, 31, 33-37, and 43-97 without prejudice. Claims 38-42 have been amended. New claims 98-135 have been added. Claims 22-30, 32, 38-42 and 98-135 are pending. Reexamination and reconsideration are respectfully requested.

Applicant has canceled claims 1-21, 31, 33-37 and 43-97 without prejudice to prosecute these claims in a subsequent application or applications. Claims 56-97 were previously withdrawn by the Examiner as directed to non-elected subject matter. The rejections of claims 1-21, 33-37 and 43-55 are rendered moot in light of the cancellation of these claims.

Claim 22 was rejected under 35 U.S.C. 102(e) as unpatentable over White (USP 6,193,507). The rejection is respectfully traversed. Claim 22 is directed towards a loadlock including "a first support structure in said chamber body adapted to support one unprocessed substrate; a second support structure in said chamber body adapted to support one processed substrate; said first support structure being disposed above said second support structure." The loadlock recited in Claim 22 also recites the presence of "a cooling plate" and "a heating device." Applicant respectfully submits that the Examiner has cited no portion of White describing or suggesting a first support structure over a second support structure as recited in claim 22. In addition, the Examiner cited no portion of White describing both a cooling plate and a heating device in the loadlock as recited in claim 22. Thus, claim 22 (and its dependent claims 23-30 and 32) are in patentable form.

Claims 23-25 were rejected under section 103 as unpatentable over Edwards (USP 6,042,623) in view of White. Claims 23-25 depend from claim 22, which was discussed above. The Examiner stated that it would be obvious for one of ordinary skill in the art to provide the apparatus of Edwards with the heating elements of White. Applicant respectfully submits that one of ordinary skill would not make the combination suggested by the Examiner. White appears to describe a system in which substrates are positioned side by side, with heating elements positioned both above and below the substrates (col. 7, lines 29-33). White also appears to describe its system as being configurable as a heating system or a cooling system. The Examiner cited no portion of White describing a system including both heating and cooling elements at the same time, and has provided no suggestion as to how one of ordinary skill would modify Edwards to include heating elements such as described in White, given that Edwards already includes water cooled wafer supports as described in Edwards at, for example, col. 11, lines 28-31. Accordingly, the Examiner's citations to Edwards and White, considered either alone or in combination, do not suggest or describe the elements recited in claim 22 as described above, or in claims 23-25, which depend from claim 22. has cooling/heating

Claim 26 was rejected over Edwards. Claim 26 depends from claim 25, which was discussed above. The Examiner stated at paragraph 8 of the Office Action that Edwards "fails to teach a heater above the first support." For this reason and at least the reasons stated above, applicant respectfully submits that claim 26 is in patentable form.

Claims 27-32 were indicated as being allowable if rewritten in independent form. Claim 31 has been canceled. Applicant notes that claim 27 does not recite the element relating to a middle plate that the Examiner referred to in paragraph 10 of the Office Action. However, claim 27 depends from claim 22, which has been discussed above.

For at least the above reasons, applicant respectfully submits that claims 22-30 and 32 are in patentable form.

Claims 38-42 were indicated as being allowable if rewritten in independent form. Claim 38 has been rewritten in independent form, and claims 39-42 depend therefrom. Applicant has amended the preamble of these claims for clarity and not in relation to any patentability rejection, deleting the term "semiconductor" and inserting the word "substrate". Applicant also notes that claim 38 does not include the element relating to a middle plate that the Examiner referred to in

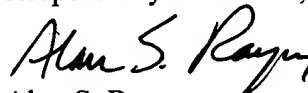
paragraph 10 of the Office Action. Applicant respectfully submits, however, that claim 38 contains elements that are neither described nor suggested by the art cited against the other claims. For example, claim 38 recites the presence of a "cooling plate" and a "heating element". Similar elements were discussed above for claims 23-25 above. For similar reasons, claim 38 is in patentable form. Applicants respectfully submit that claims 38-42 are in patentable form.

New claims 98-135 have been added. Support for these claims may be found throughout the specification, drawings and original claims. It is believed that no new matter has been entered.

Attached hereto is a marked-up version of the claim changes made by the present amendment. The attached page is captioned "Version with markings to show changes made."

Applicants respectfully submit that claims 22-30, 32, 38-42, and 98-135 are in patentable form. Reexamination and reconsideration are respectfully requested.

Respectfully submitted,



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Dated: October 11, 2001

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I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner of Patents, Washington, D.C. 20231 on Oct. 11, 2001.

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Oct. 11, 2001  
Date

**Version With Markings to Show Changes Made**

Claims 38-42 have been amended as follows:

38. (amended)        A [semiconductor] substrate processing system [as in claim 36,  
wherein said loadlock further comprises] comprising:  
    at least one processing chamber;  
    a transfer chamber connected to said at least one processing chamber; and  
    a loadlock connected to said transfer chamber, said loadlock comprising:  
        a single substrate upper support and a single substrate lower support;  
        a transfer aperture to transfer a single substrate between said transfer chamber and  
        said loadlock;  
        an elevator to raise and lower said single substrate upper support and said single  
        substrate lower support;  
        a cooling plate disposed in said loadlock and positioned to accept a single  
        substrate from said single substrate lower support;  
        a load/unload aperture through which an unprocessed substrate may be loaded into  
        said loadlock and through which a processed substrate may be unloaded from said loadlock;  
        a transfer aperture through which an unprocessed substrate may be delivered from  
        said loadlock to said transfer chamber and through which a processed substrate may be delivered  
        from said transfer chamber to said loadlock; and  
        a heating element [and said heating element is] disposed above said single  
        substrate upper support.

39. (amended)        A [semiconductor] substrate processing system as in claim 38,  
wherein said loadlock further comprises a middle plate disposed above said cooling plate  
and below said heating element.

40. (amended)        A [semiconductor] substrate processing system as in claim 39,  
wherein said single substrate upper support is connected to said middle plate.

41. (amended) A [semiconductor] substrate processing system as in claim 40, further comprising a gas inlet to supply a gas to said loadlock.

42. (amended) A [semiconductor] substrate processing system as in claim 41, wherein said loadlock includes a top surface, said gas inlet being located along said top surface of said loadlock.

